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Mackenzie et al.(10) **Pub. No.: US 2019/0023115 A1**(43) **Pub. Date: Jan. 24, 2019**(54) **TWIN MOTOR DRIVE SYSTEM FOR
HYBRID ELECTRIC VEHICLE***B60K 6/26* (2006.01)*B60K 6/24* (2006.01)*B60K 6/52* (2006.01)(71) Applicant: **Ford Global Technologies, LLC,**
Dearborn, MI (US)(52) **U.S. Cl.**CPC *B60K 6/40* (2013.01); *F02F 7/0082*(2013.01); *B60K 6/42* (2013.01); *F01M**11/0004* (2013.01); *B60K 6/24* (2013.01);*B60K 6/52* (2013.01); *B60K 6/26* (2013.01)(72) Inventors: **Kevin Mackenzie**, Canton, MI (US);
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(57)

ABSTRACT

Methods and systems are provided for a hybrid electric vehicle including a front-wheel drive system and a rear-wheel drive system. In one example, the rear-wheel drive system includes an internal combustion engine configured to drive rear wheels of the vehicle, and the front-wheel drive system includes a first electric motor and a second electric motor mounted directly to opposing sides of the engine. The first electric motor is coupled to a first reduction gearbox to drive a first front wheel of the vehicle, and the second electric motor is coupled to a second reduction gearbox to drive a second front wheel of the vehicle.

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